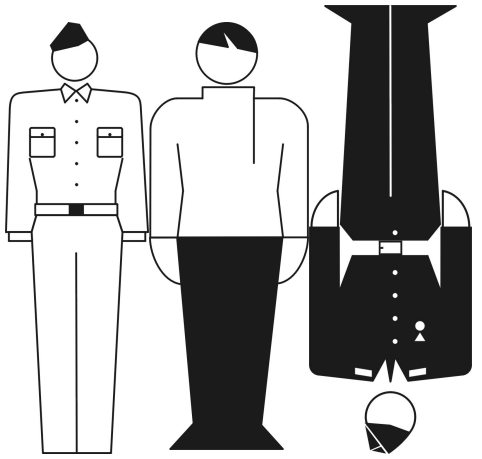
Anthrax Vaccine Immunization Program

Leader's Brief:
Force Health Protection Against Anthrax



Updated:

Key Messages

- Anthrax used as a biological weapon represents a grave and urgent threat to U.S. Armed Forces

- Weaponized anthrax is as lethal as the Ebola virus
  - once symptoms develop, death is > 99 percent certain in unvaccinated, untreated individuals

- We have a safe and effective vaccine, licensed by the FDA, to protect against the deadly threat of anthrax weapons

Background on Anthrax

- Recognized as an illness for centuries
- Spores can survive in soil for decades
- Once common where livestock were raised
- Animal anthrax controlled with a vaccine for livestock
- Human infection usually results from direct contact with infected animals or animal products

Anthrax

- Anthrax is a known biological weapon.
- Inhalational anthrax is highly lethal.
- Vaccination against anthrax is critical for
  your protection.
- This is a mandatory vaccination program,
  except for legitimate medical exemptions.

Threat

- Anthrax: the most likely Biological Warfare agent:
  - Easy and cheap to produce
  - Spores make an effective biological weapon
  - Can be stored for a long time
  - Can be dispersed in air by a variety of weapons
  - Inhalational anthrax is highly lethal
  - Odorless, colorless, tasteless, difficult to detect
- Anthrax will cause widespread illness and death among unprotected personnel.

Anthrax: Three Disease Types

- Skin (Cutaneous) Anthrax
  - 95% of natural cases; spores enter skin breaks
  - Responds well to antibiotics… 1 in 5 die if untreated
- Gastrointestinal Anthrax
  - Ingestion (e.g., eating undercooked, infected meat)
  - Severe GI symptoms… 50% may die even with treatment
- INHALATIONAL ANTHRAX
  - "Flu-like symptoms" early, rapid deterioration, and death
  - Mortality may exceed 80% after symptoms occur, despite treatment

Inhalational Anthrax

- Inhalational anthrax occurs when spores enter the body through the lungs
- Not transmitted person to person
- Spores migrate to lymph system where bacteria multiply and produce lethal toxins
- Toxins cause bleeding and destruction of the brain or vital organs in the chest, resulting in death

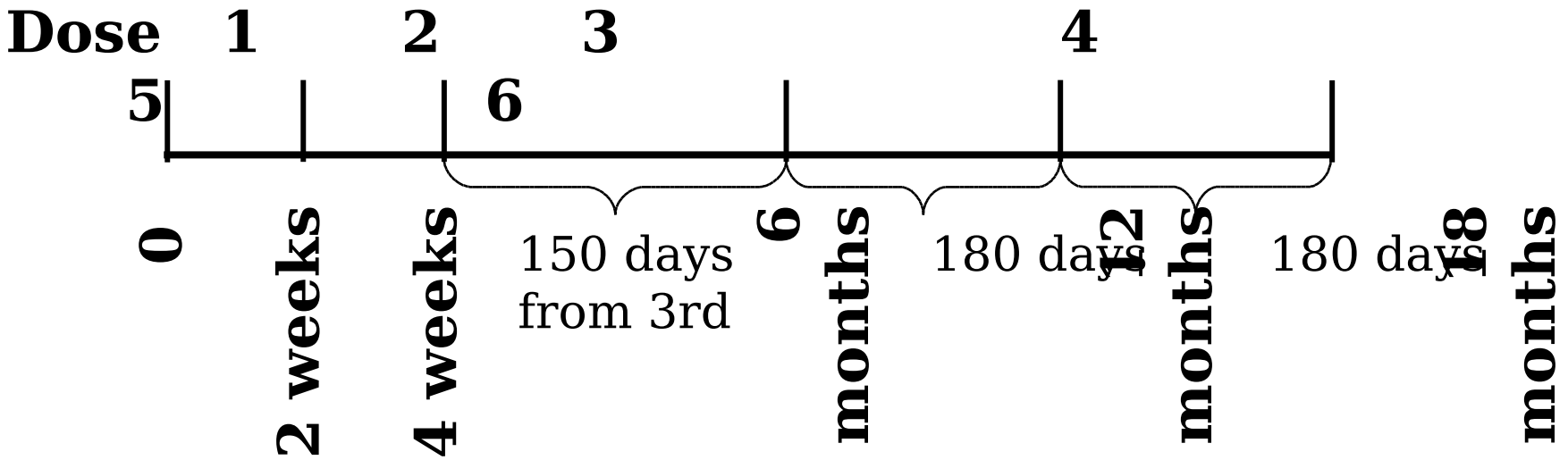
Anthrax Vaccine Facts

- Vaccine primes body's natural defense system to fight anthrax
- Anthrax vaccine cannot cause anthrax
- Critical part of your protection against anthrax
- Licensed by the Food and Drug Administration in 1970
  - Safely used for nearly 30 years
  - Supplemental tests on vaccine stockpile before released to the Department of Defense (DoD)

Response to Vaccination

- Anthrax vaccine, like other vaccines, stimulates your body to produce protective antibodies
- The full series is needed to obtain maximum and on-going protection
- Even with a good antibody response, your defense system can be overwhelmed, given a massive number of spores. Use your mask too.

Vaccine Schedule



Six shots over 18 months, plus annual boosters

Updated:

Pregnancy

- Vaccinations routinely deferred during pregnancy
- Before vaccination, ask each woman if pregnant, defer vaccination if pregnant
  - Continue when no longer pregnant
- No reason to delay pregnancy or conception efforts after vaccination
- Breast feeding not a contraindication to vaccination

Injection-Site Reactions

- From Hawaii, Korea, Ft. Bragg, Ft. Detrick, 1993-99: Redness, itching, swelling (lasting a few days)
  - Less than 1 inch: men up to 30%, women up to 60%
  - 1 to 5 inches: 1% to 5%
  - Greater than 5 inches: up to 1%
  - Swelling may extend below elbow
- Soreness or local pain in 8% to 19%
- Lump: 30% to 90% (may persist a few weeks)
- Women report reactions more often than men

Systemic Events

(Events Away from the Injection Site)

- From 5% to 35% will notice:
  - – Muscle aches, joint aches, chills, low-grade fever,
    no appetite, headaches, nausea, malaise, related
    symptoms
  - – Women report these symptoms more often than men
  - – These symptoms usually go away in a few days, less
    than a week

Injection-Site Reactions and Systemic Events

- Ask your health care provider whether ibuprofen, acetaminophen, antihistamines, or other medications may help reduce bothersome symptoms.
- Report adverse events after vaccination to health care provider promptly, before additional vaccinations.

Adverse Event Reporting

- Vaccine Adverse Event Reporting System (VAERS)
  - FDA reviews 100% of adverse-event reports submitted to either FDA or DoD
  - Anyone can submit a Form VAERS-1
- DoD requires a Form VAERS-1 submission for:
  - Loss of duty greater than 24 hours
  - Hospitalization
  - Suspected vaccine vial contamination
- Other submissions permitted
- Form VAERS-1 may be obtained from:
  - 1-800-822-7967/ www.anthrax.osd.mil/vaers/vaers.htm

Reserve Component Adverse-Event Guidance

- An individual experiencing a vaccine-associated adverse event in a non-duty status:
  - Seek medical evaluation at a DoD, USCG, or civilian medical treatment facility, if necessary
  - Must report the event to your unit commander or designated representative as soon as possible
  - See local medical department or squadron for guidance
- Commander will determine Line of Duty and/or Notice of Eligibility status, if required

Conclusions

- Anthrax is a significant threat to our forces
- Anthrax vaccine is safe and effective
- Personal protective measures are still important
- Life saving benefit of anthrax vaccine make this a mandatory immunization program
- Vaccination is a crucial part of force health protection and readiness

Information Sources

- Chain of command
- Http://www.anthrax.osd.mil
- Http://www.defenselink.mil
- Http://www.cdc.gov
- Http://www.aviationmedicine.com
- Call Toll Free 1-877-GET-VACC
  (1-877-438-8222)